

CACTUS AND SUCCULENT JOURNAL

Of the Cactus And Succulent Society
Of America

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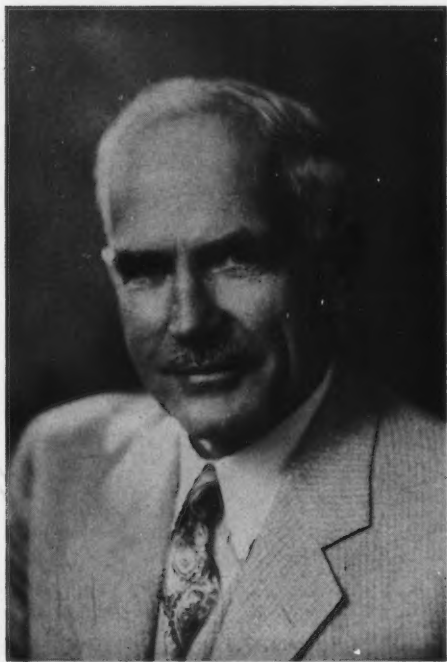
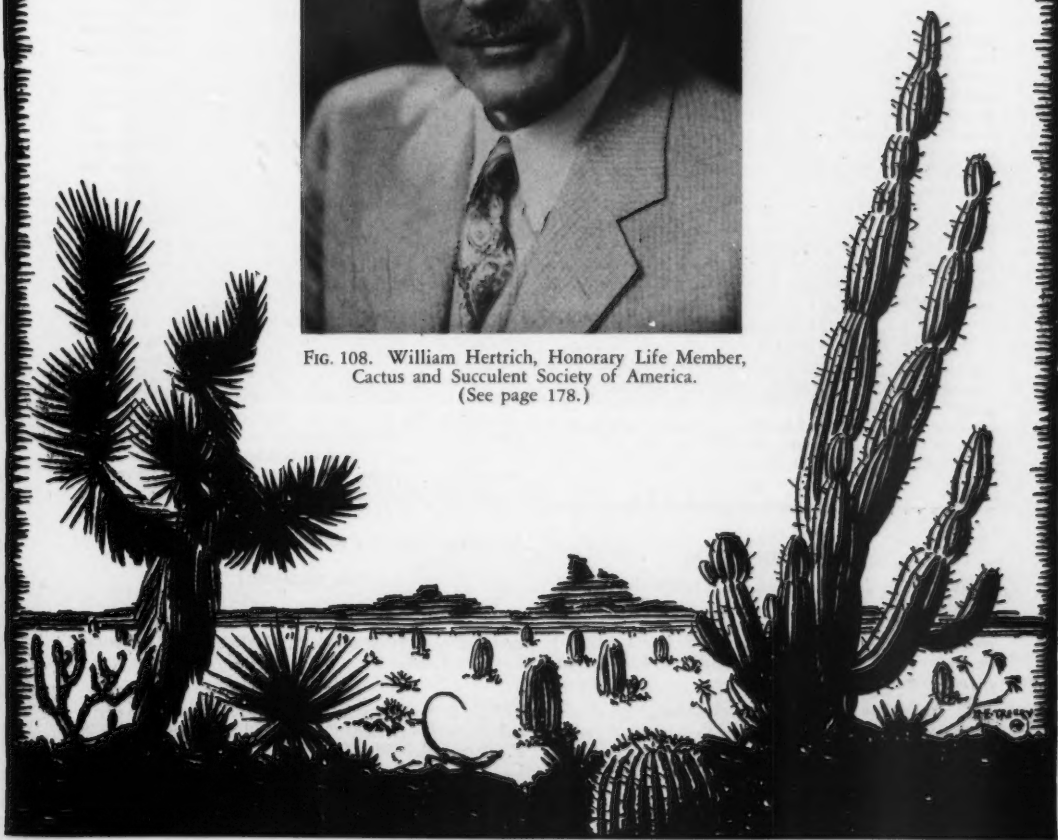


FIG. 108. William Hertrich, Honorary Life Member,
Cactus and Succulent Society of America.
(See page 178.)



CACTUS AND SUCCULENT JOURNAL

Published and owned by the Cactus and Succulent Society of America, Inc., 132 W. Union St., Pasadena, Calif. A magazine to promote the Society and devoted to Cacti and Succulents for the dissemination of knowledge and the recording of hitherto unpublished data in order that the culture and study of these particular plants may attain the popularity which is justly theirs. North and South America \$3.00 per year; foreign \$3.50 by money order. Mail application to SCOTT HASELTON, Editor, 132 West Union Street, Pasadena 1, California. *Editorial Staff:* THE ENTIRE SOCIETY. Entered as second Class Matter at Pasadena, Calif., under act of March 3, 1879. Published bi-monthly. We reserve the right to accept or reject advertising or articles sent to this JOURNAL.

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No. 6

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EDITORIAL

We cannot pass the end of the year without expressing appreciation to all those who contributed to the JOURNAL. We are glad to report another year of slow but steady growth as we enter the upswing of another cycle of interest in succulent plants. As soon as our membership is sufficient to absorb the ever increasing production costs we will return to a monthly magazine. If it were possible for each member to send in one new subscription, we could adopt this plan immediately!

The editorial staff wishes each of you the best of everything for 1955 and we wish it were possible to greet each member personally. We will let our JOURNAL speak for us, and with the many new books being published, we can all enjoy the renewed interest in our hobby.

BINDING JOURNALS

This year we will bind JOURNALS as in the past. Mail your magazines complete with indexes to Cactus Journal, 132 W. Union St., Pasadena, California, together with \$2.50 for each volume (back issues can be bound but no special bindings or other books) and they will be returned pospaid with 90 days. We cannot accept any JOURNALS for binding after January 1.

THIS MONTH SPECIAL

Echinocereus: fendleri, perbellus, reichenbachii, triglochidiatus, stramineus, viridiflorus, Sclerocactus whipplei, Echinocactus horizontalis,—all large specimens \$1.00 each. *Echinomastus intertextus* 3-5 in. 50c each. *Toumeyia papryacantha* \$2.50 each. *Mammillaria wrightii* \$1.50 up.

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STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUESTED BY THE ACT OF CONGRESS OF AUGUST 24, 1912. Of Cactus and Succulent Journal, published bi-monthly at Pasadena, for October, 1950. State of California, County of Los Angeles.

Before me, a notary in and for the State and county aforesaid, personally appeared Scott E. Haselton, who, having been duly sworn according to law, deposes and says that he is the Editor-Publisher of the CACTUS AND SUCCULENT JOURNAL, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Scott E. Haselton, 132 W. Union St., Pasadena, Calif.

2. That the owner is: CACTUS AND SUCCULENT SOCIETY OF AMERICA, INC.

3. That the known bondholders, mortgages, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None. Cactus and Succulent Society is a nonprofit organization and issues no stock.

SCOTT E. HASELTON.

Notarized by E. G. Campbell. Sept. 17, 1954.

FOR EXCHANGE

Would like to enlarge my collection of Stapeliads and Ceropegias and have some fine plants to offer in exchange. ALBERT KREJCI, 10002 Sharp Avenue, Pacoima, Calif.

"Wanted, purchase or exchange: Neobesseyas, particularly those native of Canada and Wyoming." Edwin F. Weigand, 1645 Kendall Drive, San Bernardino, Calif.



FIG. 109. *Pterocereus foetidus* in type locality, near Tuxla Gutiérrez, Chiapas, Mexico.

PTEROCEREUS IN MEXICO

By T. MACDOUGALL

*Pterocereus foetidus** (MacDougall & Miranda) was described in "Ceiba," Jan., 1954. This adds still another cactus genus to the Mexican State of Chiapas.

*The writer appears as co-author because of the generous insistence of Dr. Faustino Miranda. He is also indebted to Dr. Miranda for much of the above data.

In contrast to recently described *Cryptocereus*—the "hidden cereus" of the virgin tropical rain-forest of Chiapas—*Pterocereus* is found almost at the outskirts of the capital city.

The type locality, and only known habitat, is the limestone rock strewn entrance of La Chacona barranca, about 5 miles northwest of Tuxtla Gutiérrez. Here, *Pterocereus foetidus*



ABOVE:
FIG. 110. *Pterocereus foetidus*. Picture was taken about 11 a.m. of the flower which opened the previous night. (RIGHT) Bisected flower and fruit.



FIG. 111. *Acanthocereus* sp. at Magoñé, Oax., with three-winged stems which were up to 10 feet in length. Plants are upright but need support of other shrubs to maintain this habit as they get older. Note profusion of *Monstera deliciosa* in background.

grows in open woods of low deciduous trees, at an altitude of about 2500 ft. above sea-level. The climate is comparatively hot and dry. Average rainfall is approximately 35 inches, but most of this falls during the four months of June to September.

Dominant trees of *P. foetidus* habitat are *Bursera excelsa* (copal), *B. simaruba* (palomulato), *Cochlospermum vitifolium* (pomposuchii), *Bombax ellipticum* (clavellina), *Spondias purpurea* (jocote agrio), and *Lysiloma kellermanii* (tepeguaje). Associated succulents include *Cephalocereus quadricentralis* Dawson, *Hylocereus undatus*, *Nopalea* sp., *Selenicereus* sp., *Agave* sp., and *Hechtia* sp.

In habit of growth *Pterocereus foetidus* looks like a giant upright, winged *Acanthocereus*. Its flowers resemble, in their shape and heavy structure, those of *Pachycereus*.

Because of the strictly night blooming habit of *P. foetidus*, no satisfactory photographs were obtained of the flowers, however the botanical description, in "Ceiba," is accompanied by an excellent pen drawing of the flower, by the gifted young Chiapaneco painter, Hector Ventura Cruz.

CACTUS AND SUCCULENT SOCIETY OF CALIFORNIA Meeting of September 12, 1954

The September meeting of the Cactus and Succulent Society of California was held at the beautiful home of Mr. and Mrs. Thomas Juul on the eastern slope of San Francisco's Mt. Davidson. Their garden is an outstanding one and everyone enjoyed seeing it—many for the first time.

The rock terraced hillside is planted with cacti such as tall growing *Lemaireocereus marginatus*, *Cappulocereus palmeri*, *Trichocereus macrogonus*, *Cereus peruvianus* and many smaller cacti including *Echinocactus grusonii* and *Ferocactus* as well as other smaller varieties. Many succulents are planted among the cacti to lend a touch of color. The effect shows what can be done by combining the two. Especially attractive were the *Crassula falcata* with its red flowers and a large cluster of *Cotyledon orbiculata* with its many blooms. Also of interest was a crested *Euphorbia caput-medusae*. Here and there were *Gasterias* and *Dudleyas*. *Echeveria* bordered the rocks forming the terraces.

In the greenhouse—a large well planned one—was a general collection of cacti, including species of *Mammillaria*, *Stenocactus*, *Lobivia*, *Notocactus*, *Parodia*, *Rebutia*, *Gymnocalycium*, *Astrophytum*, *Sromobocactus*, *Lophophora*, *Oreocereus*, *Harrisia* and some *Epiphyllums*.

In the electrically heated seed beds were many seedlings in various stages of development. From the amount of germination observed, Mr. Juul's method appears to be very successful.

A short business meeting was held and plans laid for the annual exhibit at the California Spring Garden Show. Mr. Ralph Hillery was appointed chairman for the event. It was also voted to exhibit specimen plants at the East Bay Council of Garden Clubs show at Lakeside Park in Oakland on September 25th and 26th.

Our President, Myron Kinnach, discussed some plants he brought from the U. C. Botanical Garden. Of particular interest was a grafted *Neo-chilena*

grown from seed obtained by Paul Hutchison on his South American trip. Also among the plants was a *Huernia*, grafted on a *Ceropegia* tuber, an *Aloe albi-flora*—a dwarf *Aloe* with white bell-shaped flower, and a new species of *Weingartia pulquinensis* var. *corroanus* and several other very unusual plants, the names of which I did not make a note of at the time.

Plans were discussed for an all day trip to Mr. and Mrs. Nevin's home in Greenfield, Monterey County, for our October Meeting.

The meeting adjourned at 5 o'clock and everyone agreed that a good time was had by all and the Juul's are to be commended for their efforts.

ANNA M. GENASCI, *Affiliate Secretary.*

FROM THE PRESIDENT'S DESK

The time has now arrived for another report of the current activities of the Society. Normally during the summer months when so many people are on vacation, the activities are at a minimum, not so this year as is evidenced by the continued interest of the members who were not lucky enough to be able to take part in those vacations.

The Society's annual open meeting is a good example of this. The meeting held Sunday, September 12, was attended by nearly one hundred local members and their friends and everyone enjoyed the meeting and the talk on a "Trip to Tehuacan, Mexico" by Mr. Gilbert Tegelberg—a long time member and past officer of the Society and still one of our leading wholesale growers of cacti and succulents.

Also, the Society held a very interesting talk and showing of colored slides, October 6, in the Auditorium of the Pasadena Public Library. This talk was by Mr. and Mrs. Hector Moir of Kauai, T.H., long time members of the Society and enthusiastic growers and students of the cacti and succulents at their home in the Islands. The color slides were superb and a packed auditorium proclaimed their approval of the perfection in color of the perfectly grown cacti, succulents, bromeliads, flowering trees. The climax was a trip to the erupting volcano on the island of Hawaii.

Now for an answer to many questions regarding a reported offer of a location for the 1957 Convention. First let me say that this offer was not made directly to the Society but was contained in a personal letter to the Editor. Nothing further has been heard of this offer and the Society is not planning on this location for three very good reasons: 1. There being nothing conclusive in this offer. 2. It would be a bad mistake to plan on holding another Convention so close to the location of the 1955 Convention. 3. It is the duty of the delegates to the Conventions to choose the location which pleases them, and not the Officers nor the Executive Board of the Society alone. The Society is happy to receive offers of locations for the coming Conventions and to bring these offers to the attention of the Delegates meeting at the next Convention.

The new membership contest is still in full swing although it is discouraging that so few of the members throughout the country have sent in new members but there is still time. Get busy.

By the time you read this, the ballots for the Election of officers will be in your hands; take advantage of your privilege as a member of the Society, and vote for your choices and send the Ballot back to the Secretary before December 15th.

Elsewhere in this JOURNAL is published further information about the 1955 Convention, so start making plans to attend and join others in enjoying this chance to mingle with other cactus enthusiasts and students and to collect or see the plants in the wilds.

HOMER RUSH, *President.*

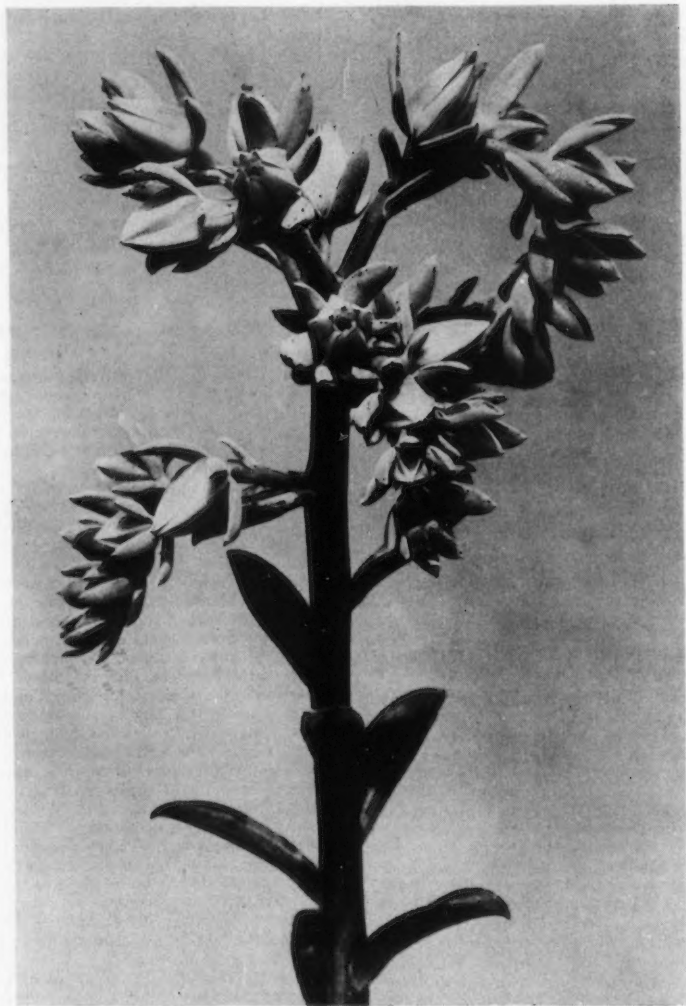


FIG. 112. *Echeveria semivestita* Moran, inflorescence. Nat. size.

Some Illustrations in *Echeveria*

By J. R. BROWN

Echeveria semivestita Moran, was named and described in this JOURNAL (XXVI [1954] 60), but due to circumstances Dr. Moran was not able to illustrate this plant, and it is hoped that the photographs shown here will augment the original description.

Plants for observation were supplied through the kindness of Mr. R. J. Taylor, who collected this *Echeveria* in Mexico, and a few notes may be of interest. While the plant illustrated shows

only a simple stem, this is not an old plant and other plants show branching from the base or from the lower part of the stem; some rosettes also have more leaves.

The photographs were taken in mid-July when the first flowers had opened. The conspicuous sepals are in evidence long before the flowers expand and their color probably gave rise to the rumor of a blue flowered *Echeveria*. The sepals are of a beautiful glaucous slaty-blue color, and as I failed to find a comparable color



FIG. 113. *Echeveria semivestita* Moran. Approx. 0.4

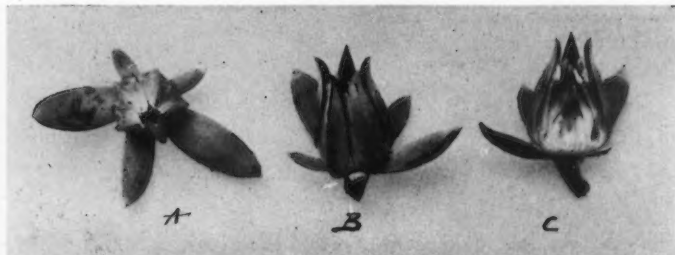


FIG. 114. Flower slightly enlarged: A. showing sepals. B. Side view of flowers. C. vertical section of flower.

in The Brit. Hort. Colour Chart I use this term *slaty-blue*. The color of the corolla is described as coral-pink, but on this plant, which was exposed to fairly strong sunlight, the color would seem to be more of a carmine color. No doubt when grown under glass the color is coral-pink. The marginal bands of dark purple also seem

to be emphasized in sunlight.

This appears to be an easily grown *Echeveria*, requiring no special soil and seems to grow equally well in good light or partial shade, the leaves becoming paler green and not so strongly channeled when grown under more shady conditions. It is easily propagated from leaves.



FIG. 115. *Echeveria semivestita* Moran, face and side view of leaves. Nat. size.

1955 CONVENTION

The El Paso Cactus and Rock Club is enthusiastically planning for the Bi-ennial Convention of the Cactus and Succulent Society of America, to be held in El Paso, July 8 to 12, 1955. Speakers have been contacted, and field trips planned. The Club is hoping for a large turnout of cactus fanciers.

Besides the unique interests for the cactophile in this area, the fabulous southwest will interest the whole family. Picturesque Juarez, Mexico, is just across the Río Grande, and can be reached with a 7½ cent bus token. Carlsbad Caverns and White Sands National Monument are nearby and many natural and

man-made wonders are in the city near El Paso.

A request to the El Paso Chamber of Commerce or to the Las Cruces Chamber of Commerce will bring you free literature about this "Land of the Sun." Start planning your vacation now to include this interesting, eventful Convention. Reservations should be made by June 1st, 1955.

Mr. John H. Leasure, 1007 Radford St., El Paso, Texas, is Chairman of the Convention Committee and Mr. Richard Clark, 7534 Hacienda Drive, El Paso, Texas, is the Vice Chairman.

Any questions or suggestions will be welcomed.

MRS. ELENOR BROWN Convention Publicity Chairman

Coryphantha arizonica in California

By GEORGE GLADE

Coryphantha arizonica (Engelmann) Br. & R. is certainly one of California's rarer cacti, both in cultivation and in nature. Engelmann states: "—probably in Southeastern California." Mr. E. M. Baxter states in his book, "California Cactus," published in 1935, "*Coryphantha arizonica* ranges into California in the eastern limits of the California distribution of *Coryphantha desertii*, that is, in the eastern 40 or 50 miles of the state near the Nevada line, not south of the Colorado River. It is evidently very scarce and must have a higher altitudinal range than *Coryphantha desertii*."

For several years my interest has been in searching for and recording on Kodachrome those species of cacti which have been listed as native to California. *Coryphantha arizonica* became the object of this search, first in the fall of 1951. In reading Mr. Baxter's book, I got the impression that he had never found this species in California but he cited two references of collection by others. The first reference was of cultivated plants at the Kessler Ranch north of Cima, California, which the rancher said were collected in a mine canyon south of Cima. The second reference was a cultivated plant in Goffs, California, collected "nearby" by the Service Station people there. In November of 1951, the Goffs area was chosen but in a two day search none were found. In the spring of 1952 search was made in the area between Cima and Nipton along the road that follows the railroad connecting the two settlements but none were found.

This spring it was decided to follow Baxter's conclusions of "—a higher altitudinal range." The area north of Kessler Ranch and in the vicinity of Kessler Peak was chosen as a likely place to begin search. This is the summit of the road from Windmill Station to Cima and is high enough that such plants as *Yucca baccata*, *Echinocereus mojavensis* and *Opuntia chlorotica* are common.

On the morning of May 22, 1954, the first one was found and in a short time, my wife, Mary, and I found twelve living plants all in



FIG. 116. *Coryphantha arizonica* collected by author in California. Reproduced from Kodachrome.

bud. Kodachromes were made and a trip for the following Sunday was planned hoping the plants would then be in flower. On Sunday morning, May 29, we again arrived on location with Mr. R. J. Gardner accompanying us to take black and white pictures. This time thirteen plants were found, only one of which was in flower. This flower is nearly two times as broad as *Coryphantha alversonii*. All plants found in this area were solitary plants with the exception of one three-headed specimen.

Mr. Baxter's two references of *Coryphantha arizonica* having been collected in California were at Goffs and south of Cima. This third location is north of Cima, in fact, near the northern base of Kessler Peak.

William Hertrich

*Curator Emeritus of the Huntington Botanical Gardens
San Marino, California*

For twenty-five years, members of the Cactus and Succulent Society throughout the world have known him personally or through his writings, the dean of horticulture, William Hertrich. In our specialized group we have been most fortunate in having such a man for a leader and his many friends will appreciate a resume of his three score years of activity with plants. Anyone can amass a collection of precious stones or other treasures but to build a living herbarium which is a thing of beauty is an enviable attainment.

William Hertrich was born in 1878 in Baden, Germany, near the Swiss frontier. He came to the United States in 1900. His boyhood had been accented by long vacations on the estates of his grandparents who owned extensive vineyards and fruit orchards. His horticultural interests were thus stimulated very early in life, and at the end of his grammar school work he took a four-year course in horticulture and floriculture as an apprentice, with the firm of Joseph Smetana in Voralberg, Austria. A graduate course in landscape gardening and estate management, before leaving his native land, equipped him to work ably with the nursery of John Reck & Son, in Bridgeport, Connecticut, soon after reaching this country.

After two years' work in this New England nursery an opportunity to work under conditions similar to the more familiar Riviera environment came to young Hertrich, from the far land of Southern California. It was the offer of a position with Mr. Henry E. Huntington, as manager of what was then a 650-acre ranch. Mr. Huntington wished to transform his ranch into a private estate, and in January, 1905, Mr. Hertrich assumed responsibility for bringing about the desired change. The estate became one of the most beautiful private gardens in the country under his inspired and capable planning and his tireless work. Now after close to fifty years development, bearing no hint of resemblance to the original peach orchard and barley field which it was at the turn of the century, the Huntington Botanical Gardens stand as a magnificent example of landscape design, as well as a rich research field for the horticulturist—a perpetual witness to one man's vision and long range diligence, the mark of genius. The Gardens have been open to the public since 1927; its Desert Garden section is internationally known, and its rapidly increasing Camellia collection is commensurately significant.

In addition to attending the purely private interests of Mr. Huntington with regard to his many horticultural assets, Mr. Hertrich became active many years ago in laying the ground work for a reliable Experiment Station for citrus growers in Southern California. At one time he was in charge of approximately 350 acres of citrus stock, directing not only their culture but also the packing and shipping of them. From 1917-1920 inclusive, complete records were kept on 18,000 orange trees alone.

This plantsman of wide interests and ability is noted in the annals of the Avocado Industry as the one who first planted commercial avocado orchards in California—seven acres in 1907, for agricultural experiment and economic produce. Avocado trees which he himself planted from seed may now be seen in their venerable trunk diameter of 36 in. or more, and branching to fifty feet. One of the results of this particular industrial experience was his charter membership with the California Avocado Association, an organization in which he has taken very active part toward shaping and directing this worthy California industry. His membership on its Board of Directors was followed by a custodianship of many of the new varieties of avocados introduced by the United States Department of Agriculture.

In addition to the multiplicity of duties in connection with his profession, William Hertrich's participation* in his own community life has carried valued significance over the years. A progressive community interest involved Mr. Hertrich some years ago in becoming active in

*Mr. Hertrich has been active in most of the plant and civic organizations of which the following have bestowed upon him an *Honorary Membership*: California Avocado Association, California Horticultural Society, Cactus and Succulent Society of America, Men's Garden Club of Los Angeles, New York Horticultural Society, Pasadena Horticultural Society, San Marino Garden Club, Southern California Camellia Society, Southern California Horticultural Institute. *Honorary President*: Pasadena Flower Show Association. In addition to the foregoing he is an *Active Member* in: American Camellia Society, Board of Governors, Los Angeles State and County Arboretum, Editorial Committee *Lasca Leaves*, Calif. Arboretum Foundation, Inc., National Shade Tree Conference, Southern California Botanists, Southern California Cymbidium Society. *Past Memberships* include: American Horticultural Council, American Association of Botanic Gardens, Botanical Society of America, National Association of Gardeners, Park Executives of America.

the incorporation of the City of San Marino. For six years he served on the School Board and 23 years on the City Council, having retired only recently. In fact whether it was to judge a flower show, lecture, prepare articles on varied subjects, or assume some civic duty, Mr. Hertrich was always generous with his valued experiences and judgment.

Before Mr. Huntington died in 1927 there were orchards of many kinds, massive stables, poultry yards, aviaries, and a Japanese Garden. Many of these soon gave way to prepare the grounds for an extensive library and art gallery then being built. Mr. Hertrich visited the garden spots of the world—Europe, Mexico, Guatemala, Hawaii, Samoa, Fiji, New Zealand, Virgin Islands, Haiti, and Cuba. He lectured and made friends wherever he went and through these contacts he acquired as gifts or exchanges the vast number of exotic plants that comprise the living herbarium. The aesthetic and scientific value of this priceless collection is without equal anywhere in the world—all due to one man's love for plants and boundless enthusiasm.

Mr. Hertrich's own personal preference of interests in the horticultural field were Orchids, Cycads, Palms, and Cacti and other Succulents. The Huntington Botanical Gardens are enriched immeasurably by a wealth of these specimens, the Cactus and Succulent Gardens being perhaps the most notable educational planting of its kind anywhere in the world. The cactus collection has gradually increased to include other xerophytic material, fifteen acres of it, comprising some 25,000 specimens half of which are indigenous to North and South America, the remainder coming from South Africa, Madagascar and the Canary Islands.

What is more fitting than a living monument for one who has contributed so much. Pasadena tree plantings, public buildings and their landscapings, and plants named for him, will continue as an inspiration for all who appreciate plants and beauty. As he continues his active life of retirement he has recently received one of the highest honors that can be bestowed on a horticulturist: "The George Robert White Medal of Honor was awarded to William Hertrich, in recognition of his unusual ability as a landscape architect and his devotion as superintendent of San Marino Ranch. It was here that Mr. Hertrich developed the amazingly beautiful private estate, Huntington Botanical Gardens, which are a monument to Mr. Hertrich's vision, skill and horticultural knowledge. Few men have served their employers with the devotion and zealous spirit manifested by the recipient of this award."

And now as the most recent contribution to horticulture, he has just completed Volume I of

"Camellias in the Huntington Gardens" a 400-page book—just a continuation of his many projects! He has had an enviable career when judged by the many accomplishments that he has crowded into one lifetime. His happiness and success is wholly attributed to his love for plants and the tolerance, encouragement, and understanding of his wife, Margarete. Who has added more beauty to a restless world than William Hertrich?

*Give fools their gold and knaves their power;
Let fortune's bubbles rise and fall;
Who sows a field, or trains a flower
Or plants a tree, is more than all.*

—WHITTIER

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A Young Lady: *Camellia japonica* Marjorie Townsend, p. 7, Dec., 1953

PARKS AND RECREATION:

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Published by Huntington Library and Art Gallery

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A Monstrose *Selenicereus* From Cuba

By E. Y. DAWSON AND H. G. RUSH

Although Cuba had already been explored extensively for cacti by the time of the appearance of the Britton and Rose monograph some thirty-five years ago, additions to the flora of the island continue to be made right up to the present. Within the last two years two species new to Cuba have been reported, namely, *Epiphyllum phyllanthus* (Linnaeus) Haworth, by Frère Alain (1952), and *Pilocereus polygonus* (Lamarck) Schumann, by Rush and Dawson (1952). The present note deals with another plant found by the senior author during a botanical trip to Cuba in the spring of 1949 (see Dawson 1949).

While collecting along the rough, limestone ridge of the south escarpment of Sierra de Esperón a few miles east of Guanajav, Havana Province, a clambering *Selenicereus* was encountered in a small, shaded, limestone cranny. Although the plant was quite dry and shriveled, several pieces were successfully brought back for cultivation in the garden of the junior author where, after five years, the strongest plant (Fig. A) produced a flower. The flower, shown in Fig. C, was malformed and failed to open because of almost complete fusion of the outer perianth segments, but in size and shape was

clearly indicative of *Selenicereus* and confirmed our supposition that the plant is a monstrose form of that genus.

Like some other monstrose varieties of cacti, such as *Lophocereus*, this plant is almost entirely spineless, having only a few white, curly bristles on the flower tube. Its most peculiar characteristic is the presence of linear, transverse areoles which often completely encircle the stem (Fig. B).

Four species of *Selenicereus* occur in Cuba of which *S. grandiflorus* (Linnaeus) Britton and Rose and *S. urbanianus* (Gürke and Weingart) Britton and Rose inhabit the general region in which the monstrose plant was found. Of these *S. urbanianus* is described as having 4 or 5 ribs, sometimes 3 or 6, while *S. grandiflorus* has usually 7 to 8 ribs. An examination of various parts of our monstrose plants shows that there is a tendency for those areoles which are not transverse and linear to be arranged in three or four rows on the stems, and for the young, rapidly growing shoots in part to exhibit a 3 to 4 ribbed character. These features seem to indicate derivation from *S. urbanianus*, and awaiting confirming evidence the plant is treated as a monstrose variant of that species.

In order to insure the perpetuation and further study of this rare but easily cultivated plant, the writers will, upon request, provide cuttings to interested institutions and private collectors. Write to E. Y. Dawson, Allan Hancock Foundation, University of Southern California, Los Angeles 7, California.

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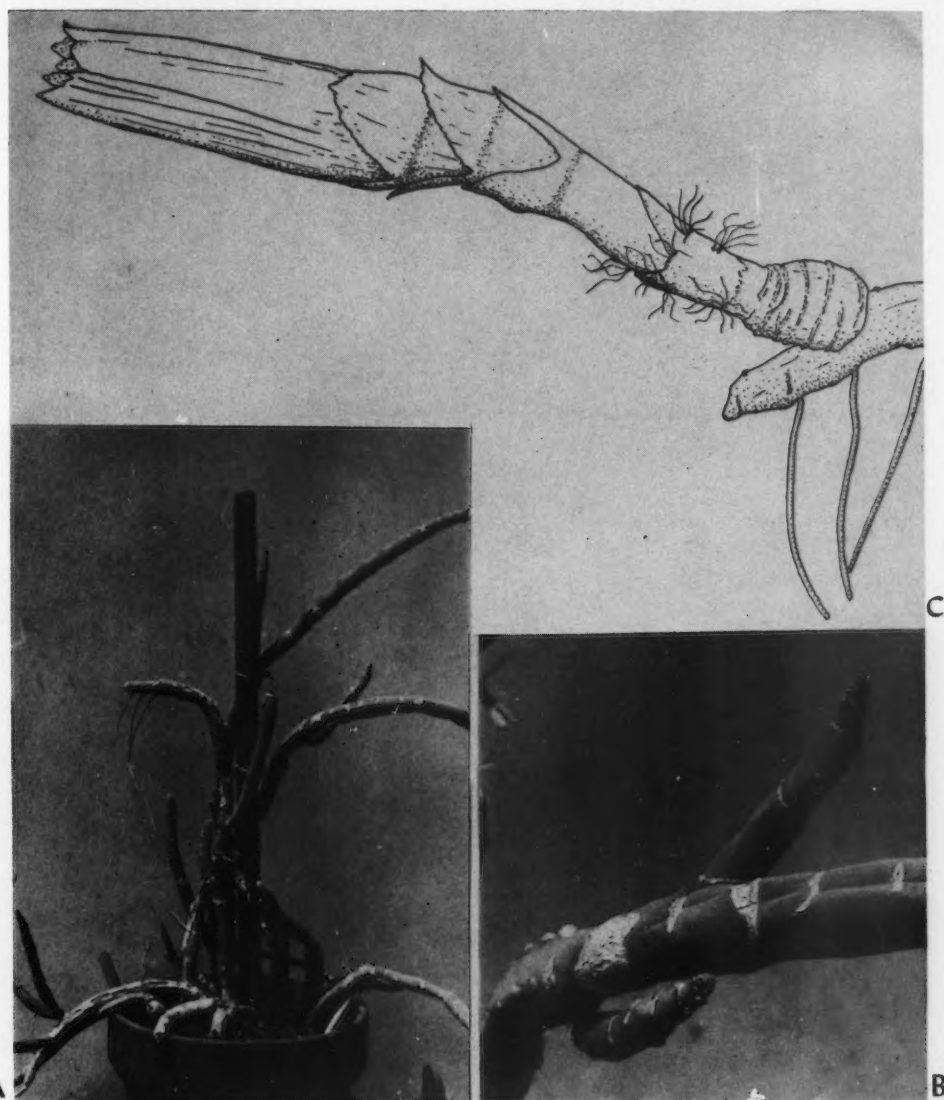


FIG. 117. (A) Monstrose form of *Selenicereus urbanianus* grown from cutting collected in Cuba. (B) Close-up of young branches showing the linear character of many of the areoles, some of which completely encircle the stem. Note, however, the four-ribbed character indicated by the arrangement of the areoles on the lower left part of the main stem in the picture. (C) Sketch of the deformed flower which appeared in July, 1954.



FIG. 118. *Blossfeldia liliputana* enlarged twice size to show character of the plant.

The Tiniest Cactus

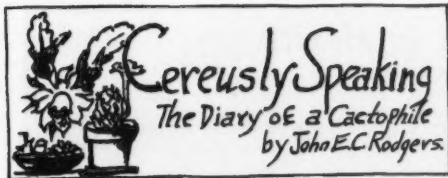
Blossfeldia liliputana was found in northern Argentina in 1936 by Harry Blossfeld and O. Marsoner. Only a plant or so was collected and until quite recently it was one of the rarest cacti in collections. A few more plants have been discovered and are now available to fanciers. It is an odd genus off by itself yet showing relationships to *Frailea* and *Parodia*. The plants range from $\frac{1}{8}$ in. diameter to $\frac{5}{8}$ in.; a very few of the largest almost $\frac{3}{4}$ in. across. They are small, almost flat, depressed disks, pale gray-green in color, the tiny areoles in a spiral pattern each filled with gray wool but without spines. The pale yellow flowers are tiny, about $\frac{1}{4}$ in. across, with few petals. The seed pod quickly develops and ripens within a month or so. The root system is on the tuberous side but due to the fact that the plants grow apparently only in narrow cracks on rock walls they are always much flattened. The plants thus formed may be 1 in. to 3 in. long with from 1 to 6 heads but hardly a half-inch wide, the flattened root $\frac{1}{8}$ in. to $\frac{1}{4}$ in. thick with a few normal branched roots at the bottom. It resembles *Frailea* in being often cleistogamous, that is the flowers self-pollinating

without ever opening, in the structure of the flower and in the quick maturation of the ovary and seed pod. *Frailea* bears spines in the areoles and a crest of bristles at the top of the ovary. The seeds are almost identical with those of *Parodia aureispina* and not like those of *Frailea* which are rugose with a large hollow hilum. They are the same size as the *Parodia*, about $\frac{1}{2}$ mm., smooth glossy brown with a white, spongy hilum as large as the seed exactly as in *Parodia aureispina*, and related species. The seed pod is of the same dry type though in *Parodia* there are bristles, the scales of the ovary in *Blossfeldia* bearing only wool in the axils.

The plants do well in a very sandy soil in a quite light position with moderate watering. Cacti with fleshy roots do not appreciate too much water. The fleshy roots are for water and food storage and are only found on plants which inhabit quite dry regions and expect long dry periods.

HARRY JOHNSON

NOTE: See this JOURNAL, Vol. XXI, No. 4, pg. 103-104 for interesting photos of this same cactus exact size.



I have two fine fruits on *Chiapasis nelsonii* and *Pseudorhipsalis macrantha*, *Epiphyllum ackermannii* (MacDougall hybrid) which I hybridized with *Aporocactus flagelliformis*. They should be interesting crosses from the standpoint of stems, flowers and growing habits.

I have six 3-year-old seedlings from my *Echinopsis albiflorus* x *Selenicereus boeckmannii* cross. Some are slightly more cylindrical than the others. The parents have (1) *Selenicereus*, 5 ribs; *Echinopsis*, 12 ribs; (2) *Selenicereus*, 8 feet high and branched, *Echinopsis*, 8 inches high and offsetting. The seedlings vary between 10 and 14 ribs with fine spines on some and coarse spines on others but definitely *Echinopsis* types at present.

My *Aloe ausana* x *longistyla* hybrids have grown to the adult size of *A. longistyla* size, but all 4 are half way between. Two budded this spring but only one bloomed. The flowers were on coarse stems and were typical *A. ausana* blooms with a long style and projecting stigma like the *A. longistyla* seed parent. Not one of the four has warty projections arranged like *A. longistyla* but there is a sort of warty projection on the white bands which resemble *A. ausana*. Only 5 seeds were viable. All grew to 5-7 leaf stage then one died. The plants have thick roots and need repotting frequently. None of the offsprings are as large as either of the parents at present and I am convinced that they will stay more or less on the miniature side.

One of my prize plants this year which bloomed for the first time was *Crassula "alba"*. The blooms are in the regular *Crassula* form both shape of flower and matter of inflorescence but they are "pure white." The leaves are broad and thick on coarse slightly pendulous stems. The leaves have a definite line of white spots around the upper edge of the newer leaves. The older ones look green but the light spots can still be seen, but are no longer conspicuous. I do not know whether I have mistreated the plant for so many years or whether it is a shy bloomer. Anyhow without any move from its regular spot, and more or less water or any other variable it bloomed and it is a beauty.

This has been a most rewarding year. Many of my rare plants bloomed for the first time and my old faithfuls did it again. Some for the 20th to 23rd time. I evolved a better plan of storage for my *Epiphyllums*, etc., and they wintered with very little stem loss. The sunshine question was of no little concern as we had rain and more rain during April and then only .78 of an inch in May. It was as if April had conspired with June for at one a.m., June 1st, we had a terrific rain storm which spoiled my flowers and washed out my lawn.

My Cacti and Succulents are all out under the grape arbor that need partial shade, my rarities in the greenhouse and my Southwesters in full sun. Surely a cactophile should be thankful for his blessings and I am.

JOHN E. C. RODGERS
1229—8th Street, Lorain, Ohio

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REPORT FROM INTERNATIONAL ROUND ROBIN No. 1

December marks the beginning of our fourth year together with only slight changes in membership. We began with seven members but now have six. I can say without reservation that it has been a most pleasurable association for all. We have enjoyed thoroughly the many beautiful pictures submitted and particularly those from Mrs. Billie Marie Anderson. Her collection of cacti is extensive, her interest unbounded. She is our Texas member. It seemed a little strange at first that Mrs. Joyce Hillmer, our New Zealand member, has seasons opposite from ours here but that fact does not affect her green thumb in any way as her resulting successes prove. She recently told us how beautifully colored her plants are this year. We are glad for her that she has acquired a greenhouse. Our retired postmaster, Mary Anderson, of Pennsylvania, has been freer since the first of June to enjoy her gardening and has made a cement block area filled with white sand for her cacti in which she sank each pot to the rim. It proved to be very successful and although she had a plastic cover to use, if needed, her plants have thrived without it. Our two English members George Hewitt, of Norfolk, and Len Gamston, of Gloucester, both told of the extremely wet season they have had. We did chuckle over the word picture Len drew of himself when he woke at two a.m. to hear the rain "just chucking it down" and his worry over his poor cacti. So—hastily donning rain togs over pyjamas he went out to rescue a few choice plants wondering what the neighbors might think of the parson out on a night like that in such attire. In spite of it all most of the cacti have survived. George reports he has many more flowers since he built a small greenhouse to house his plants. He writes with an appreciation of beauty, be it cacti or succulents or just gardening in general. It is our pleasure to note that through a method of exchange he has been able to add to his plant collection. This Robin does get around the world, through rains, drought and hurricanes with not a feather out of place. We hope it will continue to fly and to foster good friendships for a long time to come.

GLADYS H. PANIS, Director
P. O. Box 705, Falmouth, Mass.

EDITOR'S NOTE: We would be interested to know of any other Robbins that are still active. Please report to Mrs. Panis.

Habitat Photos in México

By DUDLEY B. GOLD



FIG. 119. Road between San Juan del Rio and Queretaro, State of Queretaro. The large cacti are *Lemaireocereus marginatus*. Dr. Helia Bravo is on the extreme left.



FIG. 120. *Lemaireocereus dumortieri* on Penon Viejo near Mexico City, looking N.E. and showing part of Lake Texcoco.



FIG. 121. *Mammillaria rhodantha* at home in Sierra Santa Catarina, Valley of Mexico.

Cactus in Swamps

By JOHN M. RILEY

The State of Florida offers little to the collector of cactus at first glance for this is the home of the Everglades, a land of endless swamps and barren sand. The rainfall averages 45 inches a year over the state with some areas reaching more than 65 inches. The altitude generally ranges from a few feet to absolute sea level and is composed of loose sterile sand, limestone muck or a watersoaked mat of decayed vegetation. This environment requires a continual and fierce struggle for survival. And what plant has demonstrated a mastery over adverse living conditions better than any other? Surely enough, there are the cacti, joined in battle, and most successfully too.

Beginning in the north where there is more clay and an acid soil there grows the hardy *Opuntias*, curse of the farmers. There are eleven species found naturally in the state according to Dr. John K. Small.¹ These are: *Opuntia elata*, *O. pollardii*, *O. austrina*, *O. ammophila*, *O. fiscus-indica*, *O. keyensis*, *O. dillenii*, *O. stricta*, *O. zebrina*, *O. drummondii*, and *O. brasiliensis*. They are known simply as prickly pears and are universally regarded as weeds. Their only use in

the past has been the dressing of wounds using split pads as a poultice. They are still regarded as having antiseptic qualities, and it may well be so. The *Opuntia* has succeeded in its fight for survival under every condition. It abounds in the sterile sand and thrives in the swamps of the Everglades. Mr. C. T. Simpson, one of the great naturalists of the area says, "We always associate the cacti with the desert or at least with the arid regions, but in this land of wonders two of these species grow in not only wet ground but in places where every really high tide covers their roots and the lower part of the stems."² Cacti have been personally observed thriving in impossibly wet, sodden areas right next to halophytes. Perhaps the relationship is nearer than generally believed between plants succulent for storage of water and plants succulent for survival in areas with saline soil.

As you progress southward through the state, other more interesting species of cacti appear.

¹"The Prickly Pears of Florida" Journal of New York Botanical Garden, Volume 20, pp. 21-39.

²"Florida Wild Life" by Charles Torrey Simpson, pp. 138.

From New Smyrna southward along the coast there grow many, many climbing cacti, usually twining about the Palmettos and rough barked trees. More common of these is *Hylocereus triangularis*. This plant is predominately three-angled and frequently is epiphytic, living on debris in the base of palm fronds. The flowers are nocturnal often reaching 15 inches in diameter and over a foot in length. They were in bloom during the latter part of June during the last visit to the area. Here is also found the "Rope Cactus," native to Florida. *Selenicereus boeckmannii* is found throughout the southern coastal area of Florida and in Cuba. It is often found climbing in the palms to a height of 20 to 25 feet. The flower is white and very similar to the Night-Blooming Cereus. Planted in company with these are many other of the more hardy cacti from distant places. It would take a trained botanist to identify them, however, for most Floridians have their own names for each plant. In every backyard there is likely to be a specimen or so of "Christmas Cactus," "Easter Cactus," "June Cactus" or "Night Blooming Cereus." It is interesting to note that most of these appear to be true species rather than the hybrids of lost parentage now common in most collections of cacti.

In the Mead Botanical Gardens at Orlando there are a number of Epiphyllums planted outdoors with little protection except for surrounding vegetation. While not labeled, there is one which is most certainly *Epiphyllum strictum*. The light sandy soil, frequent showers and cool dry winters are all ideal for orchid cacti. If it were not for the occasional northers which sweep across from the Gulf of Mexico, causing temperatures of 25 to 28 degrees, this would be a veritable paradise for tropical vegetation.

There is a variety of *Pereskia* cultivated here occasionally as a porch vine. These are known locally as Lemon Vines or Cherokee Cactus Vine. Curiously enough this cactus bears flowers in panicles or masses from a common stem, unlike any other cactus. The stem is scarcely succulent and a casual observer would have trouble identifying it as a cactus at all. Truly enough, though, it has spines and typical areoles. It is these spines and a tenderness to frost which give the plant an unfavorable reputation as a shrub for the home.

From the central part of Florida southward the climate is truly sub-tropical. Every tree is loaded with epiphytic plants. It is said there are more air plants in this area than anywhere else in the world. This is easy to believe for even the trees grow in trees! The strangler fig starts life as an epiphyte and then grows until it completely engulfs its host and becomes a tree in its own right. The mild climate, abundant rainfall

and low swampy ground are perfect for maintaining the high humidity needed for this type of growth.

Below the Caloosahatchee River there is found a species of cereus detested by all who encounter it, excepting only the cactiphiles who visit briefly and leave the area. This is *Cereus variabilis* or *Acanthocereus pentagonus* called simply the Dildoe cactus by the older settlers of Florida. Dr. Henry Nehrling in his excellent book, "My Garden in Florida" says, "The most plentiful and at the same time the most numerous species of Cereus found in Florida is *Cereus variabilis*. This is found only below the Caloosahatchee, but it occurs there on all high land in sufficient quantities to strike terror in the heart of every adventuresome "Conch" (Bahamian) who essays to start a tomato patch or a pineapple plantation. The stems are about the size of those of *Cereus triangularis* (*Hylocereus*), and are three, four, five, or six-sided, a peculiarity indicated by its name. They are upright, scrambling, creeping or any style of growth, and are armed with most formidable spines an inch or more long, and so strong as to penetrate thick leather. It is one of the most formidable obstacles to clearing new land, and is only conquered by the machete, and a good hot fire." This is an excellent summation of the plant's features. They truly are vicious things. Collecting specimens is a task sure to leave scratches in memory of the occasion. Another less common cactus which grows in the same vicinity is *Harrisia eriophora*. It has about ten ribs and round branches, growing to six or eight feet long in a weak and leaning sort of fashion.

In the southern tip of Florida there is found the only member of the *Rhipsalis* family natural to the United States. This has been identified as *Rhipsalis cassytha*, called locally "mistletoe cactus." A specimen collected in the Everglades was examined at the Mead Botanical Garden in Orlando. It was a true *Rhipsalis* and bore white translucent fruit with a dark pit faintly visible in the center. The name and nature of the fruit may explain its presence in the area. Any plant which is propagated by wind, by water, or by birds and which grows in the Caribbean area may flourish in Florida for a number of years until cut down by infrequent freezes. Many other cacti grow as epiphytes in this region. Among these are the *Opuntias* and *Acanthocereus pentagonus* which have been seen thriving as true epiphytes.

Around the Miami region there are great numbers of cacti grown in patios, against the house or climbing palms. It is here that the rainfall reaches 65 inches a year. The cacti imported from more arid regions appear to suffer a chronic case of wet feet, but those from

Central America and the islands do well indeed. The Fairchild Tropical Garden has a considerable collection growing in beds of raised coral rock. In company with them are orchids, bromeliads, philodendrons, palms, and hundreds of plants native to the tropics, but perfectly at home out of doors.

Below Miami on the Keys the rainfall decreases to approximately 40 inches a year. The Keys are predominately low coral islands a few feet above sea level and are covered with dense scrubby hammock forest. It is here that the best development of cacti occurs. Perhaps occurred would be better, for as rapidly as the land can be cleared it is being developed and sold for homes and fishing camps. There are still fine specimens of *Opuntias* and some tree cacti. Two species are listed as native to the area, being similar in growth and appearance. These are *Cereus keyensis* (*Cephalocereus*) and *Cereus deeringii* (*Cephalocereus*).³ Tree cacti growing in this area were examined and found to be very

similar to the Cereei which grow in the more arid regions of the west. It was impossible, however, to identify them positively as to species, native to the Keys or otherwise.

Nothing has been said of succulents that grow in the Florida area. There have been no personal observations of unusual succulent plants native to the state, although many of the taller *Euphorbias*, *Kalanchoes* and other African succulents were seen in the yards and gardens. The Spanish Bayonet, a plant often mentioned with cactus, grows here and the common blue-green Century Plant (*Agave*) grows wild with a vigor which is rapidly earning it a reputation as a weed. Many of the epiphytes really qualify as succulent plants, some storing water within the leaves and others in reservoirs formed by the leaves. However, to limit one's interests (and collections) the line must be drawn somewhere.

If there is a chance to vacation in this area, Florida offers some truly astonishing opportunities, both for the fisherman and for the collector of the plants so jealously guarded in greenhouses and dwindle gardens over the rest of the country.

³"Tree *Cereus* of the Florida Keys," *Journal of the New York Botanical Gardens*, Volume 18, 1917, pp. 199-203.

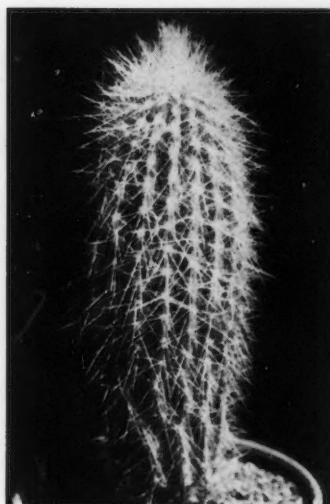
NAME YOUR PLANTS

PART II

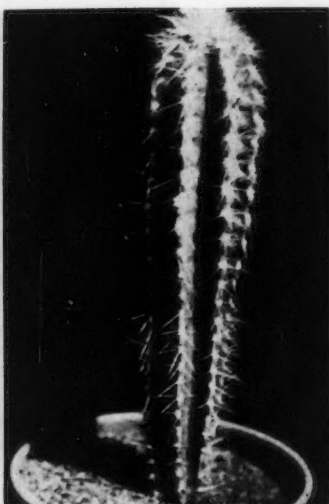


Cephalocereus senilis

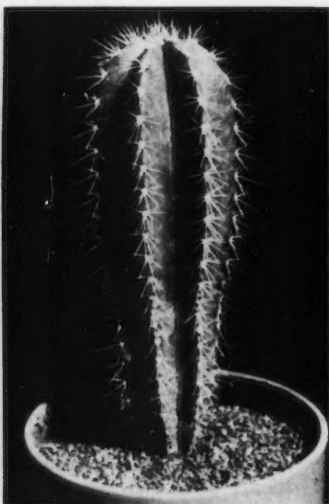
We have received so many letters of appreciation for the printing of the cactus pictures under the caption of "Name Your Plants" in the July-August issue that we are showing you another group. Howard Gates has loaned us these plates from his new retail catalog and include many of the rarer cacti. Most of the cacti were planted in 3-inch pots and were grown from seed. Seedlings are interesting because those are the plants which are most satisfactory to establish and often show characteristics which are lost in mature plants. The cover of Gates Cactus, Inc., Price List shows a natural size photo of Dawson's *Mammillaria nejapensis*.



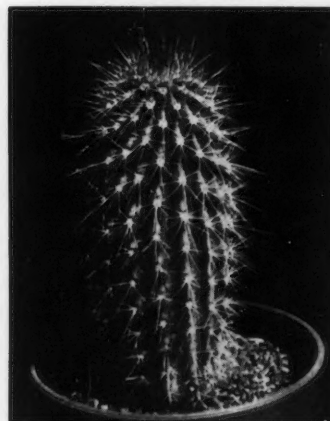
Cephalocereus chrysacanthus



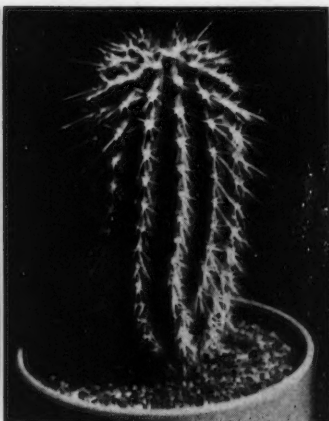
Cephalocereus sartorianus



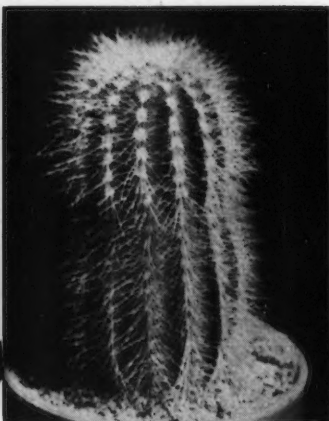
Escontria chiotilla



Cephalocereus apicecephalum



Cephalocereus mezcalaensis



Echinocereus baileyi



Leuchtenbergia principis



Lophocereus schottii monstrosus

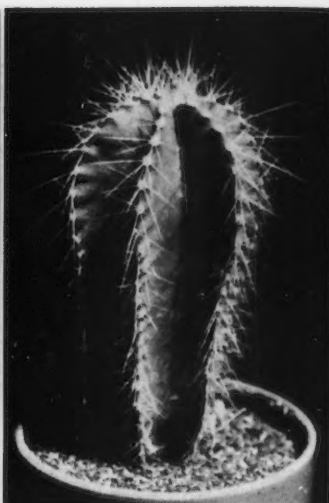


Aloe variegata (succulent)

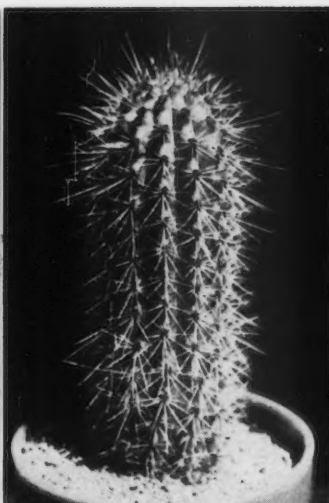
FIG. 122. Illustrations from Gates Cactus, Inc., retail list.



Espostoa lanata



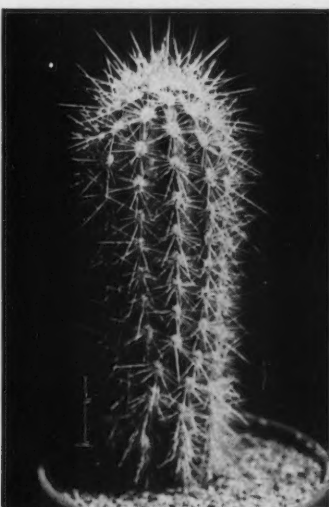
Lemaireocereus dumortieri



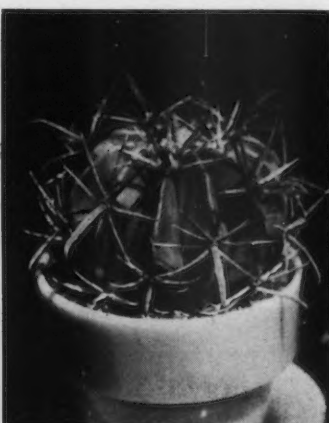
Lemaireocereus littoralis



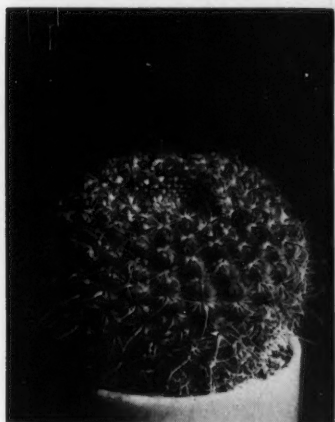
Lemaireocereus weberi



Pachycereus pringlei



Ferocactus latispinus



Notocactus apricus

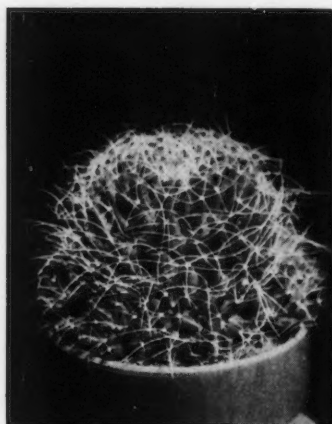


Notocactus mammillaris



Lemaireocereus chichipe

FIG. 123. Illustrations from Gates Cactus, Inc., retail list.



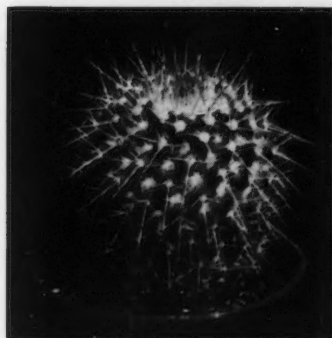
Mammillaria captotricha



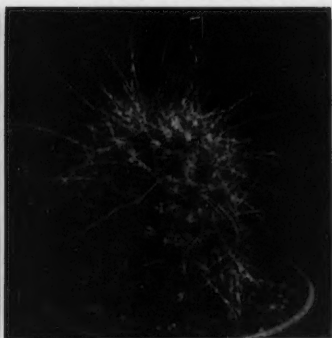
Mammillaria compressa



Mammillaria babniana



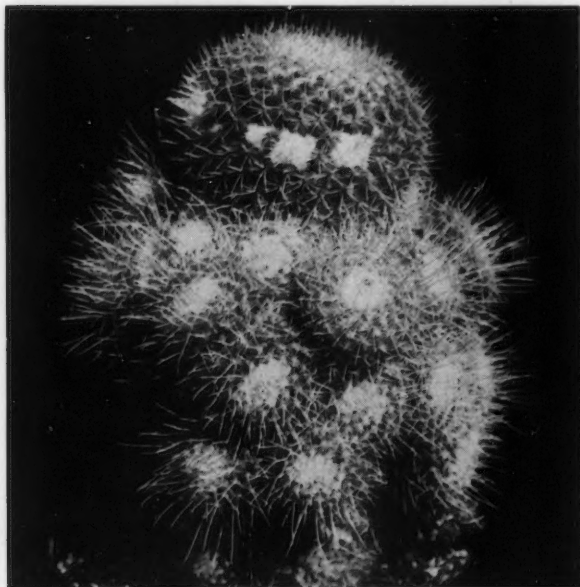
Mammillaria nejapensis



Cocchemia setispina



Mammillaria wildii

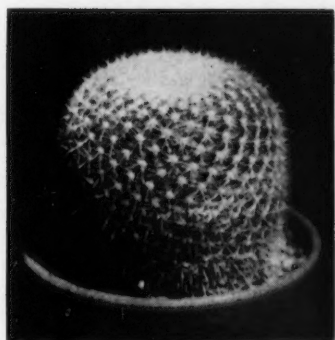


Mammillaria geminispina



Mammillaria rhodantha

FIG. 124. Illustrations from Gates Cactus, Inc., retail list.



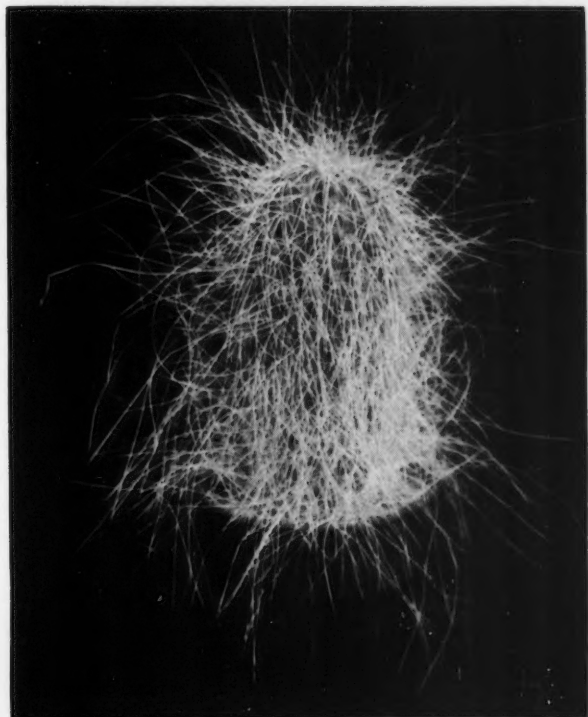
Mammillaria celsiana



Mammillaria magnimamma



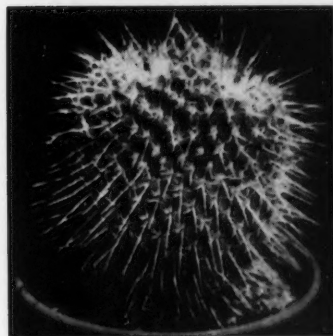
Mammillaria collinsii



Opuntia erinacea Eng. 1856 (syn. *O. ursina* Weber 1898).



Mammillaria winteriae



Mammillaria parkinsonii



Echinocereus albispinus



Agave victoriae-reginae (succulent)



QUESTIONS and ANSWERS

Conducted by
HARRY JOHNSON
Paramount, Calif.

Question: Will you please list the favorite cacti and succulents for greenhouse culture in the north. A. B., Portland, Oregon.

Answer: Among columnar cacti the favorites are Old Man Cactus, Peruvian Old Man (*Espositoa* spp.), Old Man of the Mountain (*Oreocereus*), Woolly Torch (*Cephalocereus*) *Cleistocactus stransii*, *C. hyalacanthus*, *C. baumannii*, *Lemaireocereus pruinosus*, *Cereus peruvianus* and the various other true cerei, Peanut Cactus (*Chamaecereus*), Moon Cacti (various *Eriocereus*), giant Mexican *Cereus* (*Pachycereus*). All the columnar cacti do well.

The globular or ball type cacti especially liked are numerous as they bloom freely when quite small, in most instances. *Mammillaria* is a very fine genus and always popular. There are scores of fine species including Powder Puff (*M. bocasana*) Thimble (*M. fragilis*) Snowball (*M. candida*) Coral Cactus (*M. beyderi*) Old Lady (*M. bahniana*). The genus *Lobivia* is in almost all species very free in flower. *L. aurea*, *L. bertrichiana*, *L. larabei*, *L. famatimensis*, *L. pentlandii*, *L. sanguiniflora*. *Notocactus* is a fine genus as many of the plants have bright colored spines as well as charming flowers. Silver Ball (*Notocactus scopae*), Golden Ball (*N. leninghausii*), Yellow Ball (*N. graessneri*), *Notocactus hasselbergii*, *N. ottonis*, *N. schumannianus*, *N. rutilans*, *N. submammulosus*, *N. tabularis*. *Rebutia* is a particular favorite of mine as the plants do well almost anywhere and flower freely. *Rebutia minuscula* the Red Crown Cactus has long been popular. It, like most *Rebutias*, has only weak bristles for spines and enjoys some shade and moisture. In spring it is loaded with its bright red blossoms. *R. violaciiflora* has brilliant pink blossoms, *R. elegans*, *R. pseudodeminuta*, *R. senilis* all have various shades of red flowers. *Parodias* are easy to grow and all have large blossoms on small, bright spined plants. *Parodia aureispina* (Tom Thumb Cactus), *P. mutabilis*, *P. sanguiniflora*. This last is exquisite with large, shining, red flowers. *Thelocactus bicolor*, the Glory of Texas, flowers many times during spring and summer. *Stenocactus* or Brain Cacti are pretty plants with their thin waved ribs and striped flowers. *Gymnocalycium* or Chin Cacti are all easy to grow and very floriferous, the flowers ranging from white to pink, red and yellow. *Echinopsis* or Easter Lily Cacti have been popular for over 100 years.

There are a great many species and all are easy to grow and flower. The flowers of most are very large 6 ins. to 10 ins. long, much larger than the plants. Pink Easter Lily (*E. multiplex*), White Easter Lily (*E. turbinata*), Pygmy Easter Lily (*E. bamatacantha*) a dwarf but very free in flower. In my Paramount hybrids there is now a complete color range from pink to red including the lovely shrimp and salmon pinks. Some were still flowering in September. *Astrophytum*s are always liked for their odd sculptured shapes. Bishop's Cap and Star Cactus are familiar to all.

Among the night blooming, climbing cacti, Queen of the Night (*Selenicereus macdonaldiae*) and Princess of the Night (*S. pteranthus*) are the best known. The huge flowered Honolulu Queen Cactus (*Hylocereus trigonus*) is also a favorite.

Orchid Cacti are increasingly more popular as collectors discover how easily they can be grown and flowered. There are hundreds of kinds in all colors. Gloria is a fine red; Eden and Moonrise fine whites; Hermosissimus a brilliant striped combination of red, blue-violet and orange; Agatha and Padre warm pinks.

A whole group of shade loving, epiphytic cacti are available to the fancier. They grow under about the same conditions as the common African Violet and thrive well in regions with cool summers. Christmas Cactus (*Zygocactus*) almost everyone knows. That there are many kinds is not so well known. Some, as Thanksgiving Cacti and *Zygocactus bicolor*, flower from October to December with rich salmon-pink blossoms. Spring Beauty (*Rhipsalidopsis rosea*) likes cool, cloudy or foggy climates and is exquisite when covered with its soft pink blossoms. Easter Cactus (*Schlumbergera gaertneri*) is easy to grow now in our Jungle Mix. In ordinary soil mixes they apparently do not thrive. Flowers bright scarlet in spring. Unbelievably free flowering. The new hybrids between Easter Cactus and Spring Beauty open up a new vista for those who are living in the northern states. Andraea has 3 in. light crimson blossoms that last 2 weeks. Even cuttings flower. *Disocactus eichlamii* is a fragile plant from the cool, foggy rainforests of Guatemala. Its tubular red blossoms are lovely in the spring.

Almost all succulents will do well in the north if kept on the dry side. Where the atmosphere is moist the Mexican succulents are inclined to get leggy if overwatered or fertilized much.

Question: Is there a book which will give the number of ribs for each species of a genus as *Echinopsis*? Alex Casavant, Canada.

Answer: There are books that give complete descriptions of all the known cacti including the

approximate number of ribs. However, the literature is scattered over a great number of books and periodicals, many of which are out of print. The most useful one for the fancier and also one of the least expensive is J. Borg's

"Cacti" which is in English. It covers most of the cultivated cacti. The latest edition may be purchased from our Editor for \$6.50 plus 15c postage. It is illustrated but not every plant is pictured.

Observations in an Arizona Garden

By WM. MASTRANGEL

Of Rocking Horse Cactus Gardens

We have had several good rains this summer and early fall here in Arizona which definitely gave our cacti a very fine autumn appearance. They are well filled out, growing nicely and still blooming. The cacti out in the desert are also in beautiful shape even though we had a very hot summer.

I planted some seedling Melocacti under the lath and they all sunburned for me—so, I planted another group of the same in an extremely shaded part of the lath house and they are doing wonderfully. I guess one learns about cacti as long as he grows them and I don't believe there is such a person who is a professional cactus grower; we are all amateurs.

I am writing this in early October and at this time we have several Mammillarias in bloom such as *M. tetracantha*, *M. rhodantha*, *M. durispina*, *M. crocidata*, and *M. microcarpa*. Also on the day of this writing, October 5th, we have dozens of *Ariocarpus fissuratus* in full bloom with their large rose-red blossoms; also the following plants are in bloom: *Gymnocalycium friedericikii*, *G. mihanovichii*, *Lobivia binghamiana*, *L. bertrichiana*, *Epithelantha micromeris*, *Astrophytum asterias*, *Ferocactus wislizeni* and several of the succulents. The reason for so many many flowers at this late date is due to the recent rains and the continued sunshine. Usually, Arizona is very dry during September, October, and November; we will have to refrain from watering our gardens now so we can winter-harden our plants in order that they may take the shock of the coming frosts.

Have had unusual growth on the Opuntiae—some of the species noted are: *O. santa-rita*, *O. pabeacantha*, *O. ficus-indica*, and especially the rare *O. undulata* (the giant elephant ear).

Many customers have asked us how to take care of newly acquired cacti. In the case of wild plants, cut off cleanly all fibrous roots, broken roots (cut above the break), and all torn or stripped roots. Let dry in a shady place for several days to several months—depending upon the size of the plants. Small two to four inch plants may be planted after a week. Larger plants such as saguaro, barrels and large organ pipe types, need a month or more drying time

before being planted. The drying period will heal and scar over the cut roots so that when they are planted, there will be very slight chance of rot setting into the roots. If the plants acquired are those from a nursery or cactus garden, or from a friend, the roots are generally more fibrous and less stringy. Here again we cut off some of the fibrous roots—especially the ends which may be broken. Also, any larger root that may be broken or torn must be cleanly cut off with either a razor or a sharp pruner. Nursery cacti may be planted after two or three days drying time. For all the cacti mentioned above, plant in dry soil only (if possible). Pack the soil down firmly around the base of the plant just to the original soil line—characterized by slight discoloration on the under side of the plant. Remember that a cactus can be planted safely in a higher position than it was originally, but it can never be planted in such a position that its original soil lines goes below the ground. Too many cacti are lost in this manner. Plants with a great many fibrous roots such as Mammillarias, etc., should be planted so that the roots are spread out in fan fashion. This is a more natural position and those plants will do much better when care is taken to plant them in this manner. Be sure not to break any roots during the planting process—make the planting hole large enough to accommodate all the roots freely without bending, crowding or curling the roots. Do not water a newly planted cactus for at least two or three days. Some collectors sprinkle the soil lightly around the plant immediately after planting, but not enough to reach the lower roots. This method settles the soil somewhat around the plant and keeps it steady in the bed until time for regular watering.

Nursery plants which are planted in direct sunshine should be protected for a short time with a sheet of newspaper, white tissue paper, or a covering of dead grass until the plant can adjust itself to the new light conditions. The above planting procedures may be applied to the other succulents, including Agaves and Aloes, with great success.

(To be continued)



SPINE CHATS

LADISLAUS CUTAK



The vice-president of the well known and long established firm, D. Van Nostrand Company of New York, suggested to me a need for a new popular book on cactus to retail around two or three dollars. The invitation was accepted and now I am happy to announce that the manuscript has been completed and all drawings executed for the book. "Cactus Guide" is the tentative title and it is scheduled for publication in either February or March. By the time the next issue of the JOURNAL appears I may have more definite announcement to make. In the meanwhile keep my book in mind!

* * *

Two boring beetles of prickly pear have been imported into South Africa by the Division of Entomology—*Lagochirus funestus* and *Cactophagus spinolae*—in an attempt to control and eradicate the common pest prickly pear of South Africa, particularly in the coastal and subcoastal areas where the previously liberated insect enemies, *Cactoblastus cactorum* and *Dactylopius opuntiae*, had provide ineffective. *Lagochirus funestus* was imported from Australia in 1938. It is a large-winged beetle indigenous to southern Mexico, where it attacks the robust species of *Opuntia* that are closely related to *Opuntia megacantha*. There is one generation per year in the veld in South Africa. Eggs are never laid in young prickly pear plants and seldom in large plants, unless the bark of the main branches is old, gray-colored and very woody. The larvae tunnel in small groups only in the hard, woody branches and trunks of the growing pear plants, often causing the branches to break off and the whole plant to collapse; but the leaf pads and succulent segments falling to the ground, generally survive unless other species of insects, i.e. *Dactylopius* and *Cactoblastis* destroy them. Although this beetle did cause the collapse of *O. megacantha* in the veld which became infested, it failed to destroy younger plants and the fact that there were limitations in the increase of the insects mainly because of accumulations of mucilaginous sap in the egg furrows of the bark which hardened and killed most of the eggs, led to the conclusion that further expense of mass production and liberation of this beetle was not justified. The work was abandoned in 1950.

Cactophagus spinolae was imported direct from Mexico, where it is indigenous and breeds on both *Opuntias* and *Cerei*. This beetle, like *Lagochirus*, is injurious to prickly pear, mainly in its larval stage. The grubs burrow in the segments and 'trunks' of the plants, eventually causing rot and collapse of the whole plant. This insect seems to fare better than the *Lagochirus* in destroying Prickly Pear infestations but it will take an appreciable number of years to establish strong colonies of this beetle in all the subcoastal and coastal prickly-pear areas and still longer for the infestations to extend throughout these areas. If the beetle continues to progress, spread and extend its infestations in wider areas, the work and expense incurred in establishing colonies throughout the remaining prickly pear districts will be fully justified. It appears that the unusually low night temperatures have a deleterious effect on the beetles and even this insect is slowly dying out in the veld. This information

gleaned from Science Bulletin No. 340, Department of Agriculture, Union of South Africa, Pretoria, Dr. F. W. Pettey, author.

* * *

The discovery that it is possible to extract from species of *Testudinaria* one of the basic substances, diosgenin acetate, used in the manufacture of cortisone, threatened the wasteful and destructive exploitation of *Testudinaria elephantipes* in the Cape Province, where this remarkable plant is protected by law. Permits for the collection of reasonable quantities of the plant, as dictated by humane considerations, were granted by the Provincial Administration, and carried conditions whereby wholesale destruction could be prevented. The rapid fall in the price of cortisone, coupled with the discovery of other sources of the basic material, brought the exploitation of *Testudinarias* in the Cape Province to an end.

* * *

The chromosomes of *Gasteria* are very suitable for cytological studies, for in most individuals the haploid set consists of four very long and three short chromosomes. The size and low number of the chromosomes and the ease of cultivating the plants indicate the suitability of this genus for studies on the effect of radiation on chromosomes. Herbert Parker Riley and Chester C. Irvin wrote an article in the July, 1953, Bulletin of the Torrey Botanical Club for the express purpose of providing information as to the approximate stage of microsporogenesis from the size of the bud and to give approximately the duration of the various stages.

* * *

The Henry Shaw Cactus Society, each fall, sponsors a mammoth cactus show at the Missouri Botanical Garden. The last show was one of the greatest ever staged. There were more exhibitors with finer specimens and arrangements with more artistic taste. The public is invited to bring in entries but you can always spot non-members' plants because they usually are not groomed properly for show purposes. This, in no way, is meant to cast aspersions upon outsiders but it does prove that anyone affiliated with a cactus club and who takes active part in meetings is bound to receive benefits from professional and more advanced members in their hobby. Readers of this JOURNAL, if not already members of a local club, should join one nearest to their home even though it may be several hundred miles away. My "Cactus Guide," to be published early next year by D. Van Nostrand Company, will have a chapter on cactus clubs operating in various parts of our country.

SPECIAL THANKS

A few very special words of thanks are due to President Emeritus Wm. Taylor Marshall, F.C.S.S., for the very kind donation of color slides which he recently sent to your President, for use of the Society, to bolster the color slide collections. This gift will allow the preparation of one new set of slides and the balance will be integrated into other slide sets which are now in use. Many, many thanks to Mr. Marshall.



NEW BOOKS

CACTI IN FULL COLOR

The Flowering Cactus—Raymond Carlson and R. C. and Claire Meyer Proctor. This long-awaited book is now available and every cactus collector will want a copy. There are 115 photographs, 81 of which are full color. The full page plates are breath-taking in their brilliancy. The text is written for the layman and includes descriptions of the various groups, chapters on cultivation, photography and distribution. This beautiful book is 9x12 inches and is ideal for Christmas gifts. \$7.50, postpaid.

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YEARBOOK

Sukkulantenkunde V—Yearbook of the Switzerland Cactus Society—Edited by H. Krainz. The contents include: 32 pages on Mammillarias by Buxbaum, list of new genera since 1924, soil analysis, and articles on Mesembrys, Haworthias, *Acanthosicyos borrida*, *Idria columnaris* and *Welwitschia mirabilis*. Price \$1.85, postage 15c.

DESERT ANIMALS

Animals of the Southwest Deserts—George Olin and Jerry Cannon. Number 8 of the popular series published by Southwestern Monuments Association. Drawings, distribution maps, and descriptions of desert-dwelling animals will appeal to all who want to learn more of desert life. This book is doubly interesting because one of our members, George Olin, is responsible for its production. 116 pages \$1.00, postage 10c.

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Notes on Mesembryanthemums and Allied Genera—Bolus. Aug., 1954. Part III, pages 237-288, 33 full page plates of drawings. This valuable continuation of the series is now available at \$3.75.

BOOK ON CAMELLIAS

Camellias in the Huntington Gardens—William Hertrich. Many cactus growers are also interested in Camellias and especially so because our own William Hertrich is the author. There are 400 pages showing 249 full page photos of the varied forms of camellias. There are chapters on History, Culture, Propagation, Pest Control, Leaf Studies, Landscaping with Camellias, Flower Forms, Color Code, Glossary, and an extensive index with cross references to the synonyms. The three color-plates and a rich jacket make this one of the best books of the year. \$10.00, postpaid.

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